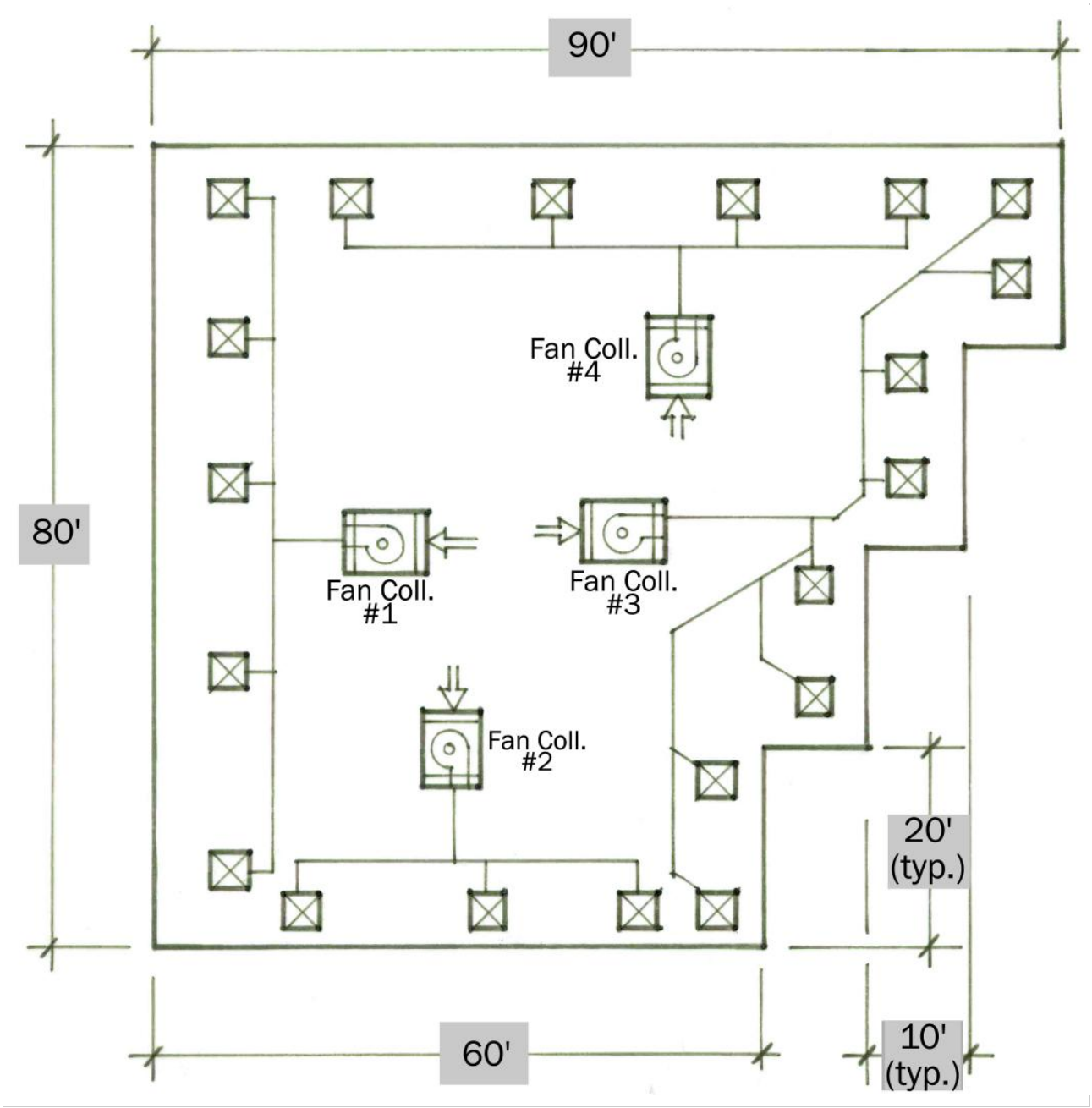
AEDG Implementation Recommendations: Zones

The Advanced Energy Design Guide (AEDG) seeks to achieve 30 percent savings over Standard 90.1-1999. This guide focuses on improvements to small office buildings, less than 20,000 square feet. The recommendations below are adapted from the implementation section of the guide, and should be used in cooperation with the whole document.* The full design guide is available from the ASHRAE website, Advanced Energy Design Guide for Small Office Buildings .

Thermal Zones



Office buildings should be divided into thermal zones based on building size, part-load performance requirements, space layout and function, number of tenants, and the needs of the user. In an office building with similar internal loads throughout, a minimum of one zone for each of the perimeter exposures, one for the top floor building core area, one for the bottom floor building core area, and one for the interior would be ideal; for small buildings, this may be impractical.

Zone Temperature Control

The number of spaces on a zone, and the location of the temperature-sensing point, will affect the control of temperature in the various spaces of a zone. Locating the thermostat in one room of a zone with multiple spaces only provides feedback based on the conditions of that room. Locating a single thermostat in a large open area may provide a better response to the conditions of the zone with multiple spaces. Selecting the room or space that will best represent the thermal characteristics of the space due to both external and internal loads will provide the greatest comfort level.